

[0066] At step 202, it is determined whether the electronic device is in a predetermined state based on the state parameter.

[0067] At step 203, when it is determined that the electronic device is in the predetermined state, a predetermined current is applied to the electro-deformable layer, such that a strength of the electro-deformable layer is increased from a first, default strength to a second strength.

[0068] Here, for the implementations of the steps 201-203, reference can be made to the implementations of the electronic device 100 in the first embodiment and the description thereof will be omitted here.

[0069] Optionally, in an embodiment of the present disclosure, the state parameter is a pressure parameter on the surface of the display unit. The step 202 of determining whether the electronic device is in the predetermined state based on the state parameter includes: determining that the electronic device is in the predetermined state when the pressure parameter is larger than or equal to a predetermined threshold.

[0070] Optionally, in an embodiment of the present disclosure, the state parameter is an orientation parameter of the electronic device. The step 202 of determining whether the electronic device is in the predetermined state based on the state parameter comprises: determining that the electronic device is in the predetermined state when the orientation parameter indicates that the display unit faces ground.

[0071] Optionally, in an embodiment of the present disclosure, the state parameter is a motion parameter of the electronic device. The step of determining whether the electronic device is in the predetermined state based on the state parameter comprises: determining that the electronic device is in the predetermined state when the motion parameter is larger than or equal to a predetermined threshold.

[0072] Optionally, referring to FIG. 4, the method for controlling the electronic device according to the second embodiment of the present disclosure further includes the following steps.

[0073] At 204, a predetermined instruction is obtained.

[0074] At 205, a predetermined alternating current is applied to the electro-deformable layer, such that a deformation of the electro-deformable layer in a direction perpendicular to the surface of the display unit changes periodically.

[0075] Optionally, in an embodiment of the present disclosure, the step 204 of obtaining the predetermined instruction includes: generating and obtaining the predetermined instruction upon detecting that the display unit has switched from a non-operating state to an operating state.

[0076] Optionally, in an embodiment of the present disclosure, the display unit is an e-paper display screen.

[0077] The method for controlling the electronic device in the second embodiment and the electronic device 100 in the first embodiment belong to two aspects based on one single inventive concept. The structure and implementation of the electronic device 100 have been explained in detail previously. The implementation of the method according to the second embodiment can be understood by those skilled in the art with reference to the previous description and thus will be omitted here for the purpose of conciseness.

[0078] One or more solutions according to the embodiments of the present disclosure have at least the following technical effects or advantages.

[0079] With the solutions according to the embodiments of the present disclosure, the electronic device can detect its state parameter and determines whether it is in a predetermined state based on the state parameter. Upon determining that it is in the predetermined state, it applies a predetermined current to an electro-deformable layer provided on the surface of the display unit, such that the strength of the electro-deformable layer is increased from a first, default strength to a second strength. With the high-strength electro-deformable layer, the display unit can be protected, so as to reduce the probability that the display unit would be damaged.

[0080] It can be appreciated by those skilled in the art that the embodiments of the present disclosure can be implemented as a method, a system or a computer program product. The present disclosure may include pure hardware embodiments, pure software embodiments and any combination thereof. Also, the present disclosure may include a computer program product implemented on one or more computer readable storage medium (including, but not limited to, magnetic disk storage, CD-ROM, optical storage) containing computer readable program codes.

[0081] The present disclosure have been described with reference to the flowcharts and/or block diagrams of the method, device (system) and computer program product according to the embodiments of the present disclosure. It can be appreciated that each process and/or block in the flowcharts and/or block diagrams, or any combination thereof, can be implemented by computer program instructions. Such computer program instructions can be provided to a general computer, a dedicated computer, an embedded processor or a processor of any other programmable data processing device to constitute a machine, such that the instructions executed by the computer or the processor of any other programmable data processing device can constitute means for implementing the functions specified by one or more processes in the flowcharts and/or one or more blocks in the block diagrams.

[0082] These computer program instructions can also be stored in a computer readable memory that can direct a computer or any other programmable data processing device to operate in a particular way. Thus, the instructions stored in the computer readable memory constitute an article of manufacture including instruction means for implementing the functions specified by one or more processes in the flowcharts and/or one or more blocks in the block diagrams.

[0083] While the preferred embodiments of the present disclosure have been described above, various modifications and alternatives to these embodiments can be made by those skilled in the art based on the fundamental inventive concept. Therefore, these preferred embodiments and all the modifications and alternatives falling within the scope of the present disclosure are to be encompassed by the claims as attached.

[0084] Obviously, various modifications and alternatives can be made to the present disclosure by those skilled in the art without departing from the spirit and scope of the present disclosure. Therefore, these modifications and alternatives are to be encompassed by the present disclosure if they fall within the scope of the claims and their equivalents.

What is claimed is:

1. An electronic device, comprising:

a display unit having an electro-deformable layer provided on its surface;